SOLID STATE TECHNOLOGY

CUMULATIVE INDEX – 1974

ARTICLES

Articles and Authors	Issue	Page
Advances in Low Temperature Die Bonding Techniques David N. Bull	Sep	60
An Overview of Silicon Crystal Growing Processes R. E. Lorenzini, F. S. Neff, D. J. Blair	Feb	33
Application of New Methods and Techniques for Failure Analysis Bernard Reich	Jan	62
Boron Tribromide as a Diffusion Source Robert C. Thomas	Nov	44
Ceramic Substrate Strength Testing Ronald P. Anjard	Apr	96
Characterization of Localized Defects in Dielectric Films for Electron Devices—Part I	Mar	35
Part II Werner Kern	Apr	78
Charge Coupled Devices and Applications J. E. Carnes, W. F. Kosonocky	Apr	67
Computer Controlled Electron Beam Projection Mask Aligner W. R. Livesay	Jul	21
Critical Parameters in Glass Sealed Ceramic Packages T. H. Ramsey, Jr.	Sep	51
Design of Polymer Resists For Electron Lithography—Part I	Jul	27
Part II L. F. Thompson	Aug	41
Development of COS/MOS Technology T. G. Athanas	Jun	54
Diffusion Pumps & Their Operation M. H. Hablanian	Dec	37
Effects of Ozone on the Crosslinking of Photoresists W. N. Jones, J. E. Dennison, B. Broyde	Jan	56
Electrical Applications of Thin-Films Produced by Metallo-Organic Deposition C. Y. Kuo	Feb	49
Electron-Beam Microfabrication Equipment for Microcircuit Research and Production W. R. Livesay	Jun	37
Fundamentals of COS/MOS ICs R. A. Bishop, D. R. Carley	Apr	85
Gold Scavenging Characteristics of Bonding Alloys David T. Novick, Alfred R. Kroehs	Jun	43
Growth of Lithium Tantalate Crystals for Transmission Resonator and Filter Devices David W. Rudd, Albert A. Ballman	Jan	52
Improved Conventional Photolithography by Relief Mask Processing Joseph L. Abita	Jun	48
Infrared Microscopy—Some Applications to Solid State Devices Dr. Barry G. Cohen	Jul	36
Interdiffusion in Electroplated Tin-Nickel on Gold M. V. Rao, M. Mitchell, R. N. Anderson	Nov	47
Interfacing a Source Utilizing Low Perbeance Ion Beam Extraction to a Beam Transport System Suitable for Ion Implantation D. J. T. Mayhall, W. P. Robinson	Nov	40
Ionizable Materials to Produce Ions for Implantation A. Axmann	Nov	36
Laser Cut Microwave Thin-Film Circuits T. D. Mino, D. J. Oberholzer, C. A. Strittmatter	Aug	37
LED Technology M. G. Craford, D. L. Keune	Jan	39
MOS-CV Test System for IC Process Control and Monitoring C. R. Viswanathan, R. Howes, V. O. Hinkle	Mar	43
Moisture in SC Packages Robert W. Thomas, Donald E. Meyer	Sep	56
Molecular Bonding Conductive Films Paul Sayers	Sep	66
A New Projection Printer David A. Markle	Jun	50
N-Type Gas Phase Dopants Carl L. Yaws, H. S. N. Setty, J. R. Hopper, E. M. Swinderman	Jan	47
Photoprintable Materials and Processing Equipment for Thick Film Microcircuitry J. E. Jolley, R. V. Weaver, J. H. Wells, J. J. Felten, D. W. Roe	May	33
Physical and Thermodynamic Properties of Semiconductor Industry Chemical Materials P-Type Gas Phase Dopants ((Diborane and Pentaborane) Carl L. Yawa, J. R. Hopper, E. M. Swinderman	Nov	31
Plasma Etching PROMs and Other Problems J. R. Devaney, A. M. Sheble	Dec	46
Preparation of Large-Area Electron-Transparent Samples from Silicon Devices G. Das, N. A. O'Neil	Aug	29
Probe Parameters and Considerations Frank J. Ardezzone	Mar	51
Properties of Multilayer Ceramic Green Sheets R. A. Gardner, R. W. Nufer	May	38
Recent Developments in Pumping Methods Increase Production Capability D. J. Harra	Dec	33
Screen: Essential Tool for Thick Film Printing F. Franconville, K. Kurzweil, S. G. Stalnecker	Oct	61
Screenability and Rheology L. F. Miller	Oct	54
Scribing and Breaking of Semiconductor Wafers James F. Marshall	Sep	70
Semiconductor Elements—The New Manufacturing Concept L. R. Rice	Feb	43
Semiconductor Wafer Measurements Robert C. Abbe	Mar	47
Some Reliability Aspects of Electron Bombarded Semiconductor Power Devices David J. Bates, Aris Silzars, Aaron Ballonoff	Jul	31
Synthesis and Crystal Growth of GaAs and GaP for Substrates A. R. Von Neida, J. W. Nielsen	Apr	90
Thin-Film Circuit Processing on Dielectric Substrates Dr. Walter H. Class	Aug	32
A Thin Film Multilayering Technique for Hybrid Microcircuits F. Z. Keister, R. Y. Scapple	May	44
Thin Film Structures With a Gap Width Comparable to the Film Thickness Fabricated by Sputter Etching T. Ricker, C. Schwing	Oct	69
Transfer Circuitry Module Technology Robert W. Nufer, Frank G. Pugliese	Oct	49
Trends in Crystal Growing Joseph Barrett, Robert Heil, Jr.	Feb	37
Ultra Pure Water—A New Utility Jaren Leet	Jan	59
Ultrapure Water and Reverse Osmosis Technology Radovan Kohout	Jun	60
Vacuum Systems for Ion Implantation Equipment J. K. N. Sharma	Dec	42
Yield Values in Thick Film Rheology A. V. Fraioli	May	48

AUTHORS

Authors and Articles	Issue	Page
ABBE, ROBERT C. Semiconductor Wafer Measurements	Mar	47
ABITA, JOSEPH L. Improved Conventional Photolithography by Relief Mask Processing	Jun	48
ANDERSON, R. N. Interdiffusion in Electroplated Tin-Nickel on Gold	Nov	47
ANJARD, RONALD P. Ceramic Substrate Strength Testing	Apr	96
ARDEZZONE, FRANK J. Probe Parameters and Considerations	Mar	51
ATHANAS, T. G. Development of COS/MOS Technology	Jun	54
AXMANN, A. Ionizable Materials to Produce Ions for Implantation	Nov	36
BALLMAN, ALBERT A. Growth of Lithium Tantalate Crystals for Transmission Resonator and Filter Devices	Jan	52
BALLONOFF, AARON Some Reliability Aspects of Electron Bombarded Semiconductor Power Devices	Jul	31
BARRETT, JOSEPH Trends in Crystal Growing	Feb	37
BATES, DAVID J. Some Reliability Aspects of Electron Bombarded Semiconductor Power Devices	Jul	31
BISHOP, R. A. Fundamentals of COS/MOS ICs	Apr	85
BLAIR, D. J. An Overview of Silicon Crystal Growing Processes	Feb	33
BROYDE, B. Effects of Ozone on the Crosslinking of Photoresists	Jan	56
BULL, DAVID N. Advances in Low Temperature Die Bonding Techniques	Sep	60
CARLEY, D. R. Fundamentals of COS/MOS ICs	Apr	85
CARNES, J. E. Charge Coupled Devices and Applications	Apr	67
CLASS, DR. WALTER H. Thin-Film Circuit Processing on Dielectric Substrates	Aug	32

CUMULATIVE INDEX – 1974

AUTHORS (continued)

Authors and Articles	Issue	Page
COHEN, DR. BARRY G.		
Infrared Microscopy—Some Applications to Solid State Devices	Jul	36
CRAFORD, M. G.		
LED Technology	Jan	39
DAS, G.		
Preparation of Large-Area Electron Transparant Samples from Silicon Devices	Aug	29
DENNISON, J. E.		
Effects of Ozone on the Crosslinking of Photoresists	Jan	56
DEVANEY, J. R.		
Plasma Etching PROMs and Other Problems	Dec	46
FELTEN, J. J.		
Photoprintable Materials and Processing Equipment for Thick Film Microcircuitry	May	33
FRAIOLI, A. V.		
Yield Values in Thick Film Rheology	May	48
FRANCONVILLE, F.		
Screen: Essential Tool for Thick Film Printing	Oct	61
GARDNER, R. A.		
Properties of Multilayer Ceramic Green Sheets	May	38
HABLANIAN, M. H.		
Diffusion Pumps & Their Operation	Dec	37
HARRA, D. J.		
Recent Developments in Pumping Methods Increase Production Capability	Dec	33
HEIL, ROBERT, JR.		
Trends in Crystal Growing	Feb	37
HINKLE, V. O.		
MOS-CV Test System for IC Process Control and Monitoring	Mar	43
HOPPER, J. R.		
Physical and Thermodynamic Properties of Semiconductor Industry Chemical Materials		
P-Type Gas Phase Dopants (Diborane and Pentaborane)	Nov	31
N-Type Gas Phase Dopants	Jan	47
HOWES, R.		
MOS-CV Test System for IC Process Control and Monitoring	Mar	43
JOLLEY, J. E.		
Photoprintable Materials and Processing Equipment for Thick Film Microcircuitry	May	33
JONES, W. N.		
Effects of Ozone on the Crosslinking of Photoresists	Jan	56
KEISTER, F. Z.		
A Thin Film Multilayering Technique for Hybrid Microcircuits	May	44
KERN, WERNER		
Characterization of Localized Defects in Dielectric Films for Electron Devices—Part I	Mar	35
Part II	Apr	78
KEUNE, D. L.		
LED Technology	Jan	35
KOHOUT, RADOVAN		
Ultrapure Water and Reverse Osmosis Technology	Jun	60
KOSONOCKY, W. F.		
Charge Coupled Devices and Applications	Apr	67
KROEHS, ALFRED R.		
Gold Scavenging Characteristics of Bonding Alloys	Jun	43
KUO, C. Y.		
Electrical Applications of Thin Films Produced by Metallo-Organic Deposition	Feb	49
KURZWEIL, K.		
Screen: Essential Tool for Thick Film Printing	Oct	61
LEET, JAREN		
Ultra Pure Water—A New Utility	Jan	59
LIVESAY, W. R.		
Computer Controlled Electron Beam Projection Mask Aligner	Jul	21
Electron-Beam Microfabrication Equipment for Microcircuit Research and Production	Jun	37
LORENZINI, R. E.		
An Overview of Silicon Crystal Growing Processes	Feb	33
MARKLE, DAVID A.		
A New Projection Printer	Jun	50
MARSHALL, JAMES F.		
Scribing and Breaking of Semiconductor Wafers	Sep	70
MAYHALL, D. J. T.		
Interfacing a Source Utilizing Low Perveance Ion Beam Extraction to a Beam Transport System Suitable for Ion Implantation	Nov	40
MEYER, DONALD E.		
Moisture in SC Packages	Sep	56
MILLER, L. F.		
Screenability and Rheology	Oct	54
MINO, T. D.		
Laser Cut Microwave Thin-Film Circuits	Sep	37
MITCHELL, M.		
Interdiffusion in Electroplated Tin-Nickel on Gold	Nov	47
NEFF, F. S.		
An Overview of Silicon Crystal Growing Processes	Feb	33
NIELSEN, J. W.		
Synthesis and Crystal Growth of GaAs and GaP for Substrates	Apr	90
NOVICK, DAVID T.		
Gold Scavenging Characteristics of Bonding Alloys	Jan	43
NUFER, R. W.		
Properties of Multilayer Ceramic Green Sheets	May	38
Transfer Circuitry Module Technology	Oct	49
OBERHOLZER, D. J.		
Laser Cut Microwave Thin-Film Circuits	Aug	37
O'NEIL, N. A.		
Preparation of Large-Area Electron-Transparent Samples from Silicon Devices	Aug	29
PUGLIESE, FRANK G.		
Transfer Circuitry Module Technology	Oct	49
RAMSEY, T. H. JR.		
Critical Parameters in Glass Sealed Ceramic Packages	Sep	51
RAO, M. V.		
Interdiffusion in Electroplated Tin-Nickel on Gold	Nov	47
REICH, BERNARD		
Application of New Methods and Techniques for Failure Analysis	Jan	62
RICE, L. R.		
Semiconductor Elements—The New Manufacturing Concept	Feb	43
RICKER, T.		
Thin Film Structures With a Gap Width Comparable to the Film Thickness Fabricated by Sputter Etching	Oct	69
ROE, D. W.		
Photoprintable Materials and Processing Equipment for Thick Film Microcircuitry	May	33
RUDD, DAVID W.		
Growth of Lithium Tantalate Crystals for Transmission Resonator and Filter Devices	Jan	52
SAYERS, PAUL		
Molecular Bonding Conductive Films	Sep	66
SCAPPLE, R. Y.		
A Thin Film Multilayering Technique for Hybrid Microcircuits	May	44
SCHWING, C.		
Thin Film Structures With a Gap Width Comparable to the Film Thickness Fabricated by Sputter Etching	Oct	69
SETTY, H. S. N.		
N-Type Gas Phase Dopants	Jan	47
SHARMA, J. K. N.		
Vacuum Systems for Ion Implantation Equipment	Dec	42
SHEBLE, A. M.		
Plasma Etching PROMs and Other Problems	Dec	46
SILZARS, ARIS		
Some Reliability Aspects of Electron Bombarded Semiconductor Power Devices	Jul	31
STALNECKER, S. G.		
Screen: Essential Tool for Thick Film Printing	Oct	61
STRITTMATTER, C. A.		
Laser Cut Microwave Thin-Film Circuits	Aug	37
SWINDERMAN, E. M.		
N-type Gas Phase Dopants	Jan	47
Physical and Thermodynamic Properties of Semiconductor Industry Chemical Materials		
P-Type Gas Phase Dopants (Dibroane and Pentaborane)	Nov	31
THOMAS, ROBERT C.		
Boron Tribromide as a Diffusion Source	Nov	44
THOMAS, ROBERT W.		
Moisture in SC Packages	Sep	56
THOMPSON, L. F.		
Design of Polymer Resists for Electron Lithography—Part I	Jul	27
Part II	Aug	41
VISWANATHAN, C. R.		
MOS-CV Test System for IC Process Control and Monitoring	Mar	43
VON NEIDA, A. R.		
Synthesis and Crystal Growth of GaAs and GaP for Substrates	Apr	90
WEAVER, R. V.		
Photoprintable Materials and Processing Equipment for Thick Film Microcircuitry	May	33
WELLS, J. H.		
Photoprintable Materials and Processing Equipment for Thick Film Microcircuitry	May	33
YAWS, CARL L.		
N-Type Phase Dopants	Jan	47
Physical and Thermodynamic Properties of Semiconductor Industry Chemical Materials		
P-Type Gas Phase Dopants (Diborane and Pentaborane)	Nov	31